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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------------|------------------|
| 08/772,259   | 12/23/1996  | KAYOKO MASAKI        | 1185.1018/JD                | 5740             |
| 21171 7590 03/01/2007<br>STAAS & HALSEY LLP<br>SUITE 700<br>1201 NEW YORK AVENUE, N.W.<br>WASHINGTON, DC 20005 |             |                      | EXAMINER<br>NGUYEN, THONG Q |                  |
|  |             |                      | ART UNIT                    | PAPER NUMBER     |
|  |             |                      | 2872                        |                  |
| SHORTENED STATUTORY PERIOD OF RESPONSE   |             | MAIL DATE            | DELIVERY MODE               |                  |
| 3 MONTHS   |             | 03/01/2007           | PAPER                       |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

08/772,259

Applicant(s)

MASAKI ET AL.

Examiner

Thong Q. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 4-6, 9 and 12-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-6, 9 and 12-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The present Office action is made in response to the amendment filed on 12/7/2006. It is noted that in the amendment, applicant has amended claims 4, 12 and 15 and canceled claims 18-22. The remaining claims 4-6, 9, and 12-17 are examined in this Office action. Note that claims 1-3, 7-8 and 10-11 were canceled in the amendments of 10/3/01 and 9/12/05.

### ***Claim Rejections - 35 USC § 112***

2. The rejection of claims 4-6, 9, 12-14, 19, 21 and 22 as set forth in the previous Office action is overcome by the amendments to claims 4, 12, and 15 and the cancellation of claims 19, 21 and 22.

### ***Claim Objections***

3. Claims 4, 14 and 17 are objected to because of the following informalities.

Appropriate correction is required.

a) In claim 4: on line 21, the phrase thereof "the second slopes define a light diffusible surface" contains at least one grammatical error. Should the mentioned phrase be changed to --each of the second slopes defines a light diffusible surface-- to avoid the problem of 35 USC 112, second paragraph?

b) In claim 14: on line 2, the feature "said light diffusible surface" lacks a proper antecedent basis. Applicant should note that the base claim 12, lines 9-10, define a plurality of diffusible surfaces. Should the mentioned feature be changed to --each of said light diffusible surface-- to avoid the problem of 35 USC 112,

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second paragraph?

c) The similar objection as set forth in element b) above is also raised to claim 17. In particular, in claim 17, on line 2, the feature "said light diffusible surface" lacks a proper antecedent basis. Applicant should note that the base claim 15, lines 14-15, define a plurality of diffusible surfaces. Should the mentioned feature be changed to --each of said light diffusible surface-- to avoid the problem of 35 USC 112, second paragraph?

***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 4-6, 9, and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art described at pages 1-5 and illustrated in figures 11-13 in view of Watai (Japanese reference No. 6-250182, of record).

The optical device as provided by the prior art which is described in the present specification at pages 1-5 and illustrated in figs. 11-13 comprises 1) a light source apparatus having a lamp (7) and a reflector (8); 2) a light guide plate (2) having a light entrance surface (T) for receiving light from the light source apparatus, an exit surface and an inclined surface inclined so that the light guide plate gradually decreases away from the light entrance surface in thickness; 3) a reflecting plate (4) disposed adjacent to the inclined surface of the light guide plate (2); and 4) a light control plate (5) having an emitting surface and an entrance surface having a prismatic configuration which entrance surface faces

the exit surface of the light guide plate (2). It is also noted that the light control plate (5) comprises the following features: First, the prismatic configuration comprises a plurality of triangular-shaped projections which are extended in one common direction and repeatedly arranged in a direction perpendicular to the mentioned common direction. Second, each triangular-shaped projections of the prismatic configuration formed on the entrance surface of the light control plate comprises a first slope which is a light source side slope and the second slope which is an exiting slope being opposite to the light source side slope; Third, the emitting surface of the light control plate is spaced from the entrance surface of the light control plate as can be seen in figures 11-12; and Fourth, the entrance surface of the light control plate faces the light guide plate (2) and the light from the light guide plate passes through the first slope of the prism and then reflects from the second slope of the prism as can be seen in figure 13.

As a result of such a structure, the optical device of the prior art meets almost the structure of the device as claimed in the present application except that the feature related to the diffusing surface of the second slope of each prism. In other words, the optical device of the prior art does not disclose that the first slope of each prism of the prismatic configuration of the light control plate is a undiffused surface, and the second slope of each prism of the prismatic configuration of the light control plate defines a diffusing surface for the purpose of generating diffused light in a substantially uniform manner and simultaneously reducing the effects of the reflecting plate.

It is also noted that the use of a light control plate having a prismatic configuration wherein the whole slant/slope surfaces of the prismatic projections or only part of the slopes of each prism constituting the prismatic configuration is made as a roughed surface which defines a diffusing surface is disclosed in the art as can be seen in the light control device disclosed by Watai. In particular, Watai discloses a light control plate and teaches the use of a light diffusing profile on a prismatic surface. The roughened pattern formed on two slopes of each prismatic projection, see section [0006]-[0012] and fig. 1 or the roughed pattern formed on only one slope of each triangular-shaped projection, see section [0013] and fig. 2, as provided by Watai will diffuse the light passing through the projection. It is also noted that the formation diffusing pattern on at least one part of the slopes of each prism as suggested by Watai is for the purpose of providing a uniform pattern of light in comparison with the use of prismatic configuration without diffusing pattern of the prior art. See sections [0002]-[0005] and figs 5-8. Regarding to the feature that the second slope of the repeated projections is a diffusible surface as claimed, first of all, it is noted that such feature is not critical to the invention as admitted by the applicant in the present specification. The support for that conclusion is found in the present application in pages 12-13 and figs. 6-8. In other words, in the embodiment described in pages 12-13 and shown in fig. 6, the diffusible surface is formed on the first slope, not the second slope. In the embodiments as described in page 13 and shown in figs. 7-8, both the first and second slopes are diffusible slopes. Second, it is within the level of one

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skilled in the art to apply the teaching provided by Watai in the light control sheet provided by the prior art by making the second slope of each prism as the slope having a roughed surface for the purpose of obtaining an device having a better quality in providing an illumination pattern because the second slope without a roughed surface of the prior art is the one provides the light to a user.

It is also noted that the combined product provided by the prior art and Watai will yield a light control plate with a prismatic configuration wherein each prism comprises an undiffused slope facing the light guide plate and a diffused slope opposite the first slope and light from the light guide plate will pass through the undiffused slope of each prism before it is reflected from the diffused slope of the prism and such operation occurs within the light control plate.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the optical device having a means in the form of a prismatic configuration formed on the entrance surface of a light control plate as provided by the prior art by making at least one slope or side of each prism of the prismatic configuration as a roughed surface as suggested by Watai on the second slope of each prism for the purpose of controlling diffusing light with substantially uniform manner.

It is also noted that while Watai does not clearly state that the formation of roughed surfaces in the prismatic configuration of the light control plate will reduce the effects of the reflecting member; however, one skilled in the art will recognize that (s)he will apply/make roughed surface(s) on the second slope of

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each prism which slope causes the light effects of the light reflecting element as a roughed surface for the purpose of eliminating such effects because such use of roughed surface(s) on the second slope of each prism of the prismatic configuration as suggested by Watai will make the conventional device described in pages 1-5 and shown in figures 11-12 have a structure which is very similar to that of the device as claimed; therefore, it is expected that the combined product will yield the same result, i.e., reduction the effects of the light reflecting plate used in the device.

### ***Response to Arguments***

6. The amendments to claims 4, 12 and 15 and applicant's arguments with respect to claims 4-6, 9 and 12-17 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any



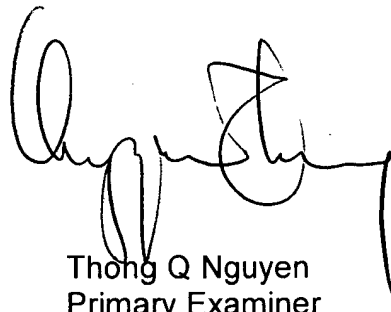
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Nguyen  
Primary Examiner  
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